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Malcolm Edwards

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Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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COVER: Coopers Hawk, by Malcolm Edwards of Lawrenceville, Georgia

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EDITORIAL

Meshing the Cogs of Environmental Management

EARLIER this year the General Assembly gave tentative approval to a plan that would create a Department of Conservation, Development and Natural Resources to be formed from the present air pollution, water pollution, conservation and economic development, marine resources and game and inland fisheries agencies. It is scheduled to become operative beginning July 1, 1974, but only if it is reenacted by the General Assembly during its current session. The objectives of the act were to avoid both duplication and fragmentation of the state's functions in environmental protection, to avoid neglect of environmental regulatory functions, and to streamline and expedite the procedures for environmentally related permits and reviews.

As drafted, the act would effectively abolish the Commission of Game and Inland Fisheries as we know it today, and divide its present functions between an advisory and policy making citizens' Board of Game and Inland Fisheries, a Commissioner of Conservation, Development and Natural Resources, and a Director of a Division of Game and Inland Fisheries who would be a staff member of the larger State governmental unit and not directly responsible to the related citizens' board.

Rather than making the state's machinery parallel to, and thus more responsive to the federal bureaucracy as was the expected intent, the Environmental Coordination Act of 1973 would do just the opposite. At the federal level the dissimilar functions of commodity-oriented natural resource management have not been combined with environmental protection. Thus sport fisheries and wildlife, commercial fisheries, and national forests are still managed by separate federal agencies, none of which is within the Environmental Protection Agency.

The Commission of Game and Inland Fisheries now administers the state's game, inland fisheries and boat laws. Its orientation is toward managing resources to provide commodities such as game, fish, and recreation, and related services for the benefit and enjoyment of the state's citizens. It is rarely involved in the issuance or denial of environmentally related permits, such permits being within the jurisdiction of the state's environmental protection agencies.

When this bill was signed into law, a special task force was appointed by Governor Holton to study implementation of the plan. After reviewing their recommendations, those of his Cabinet, staff and advisors, he has recommended that a Department of Environmental Protection be formed instead, consisting only of the present Water Control Board, Air Pollution Control Board, Marine Resources Commission, Soil and Water Conservation Commission and a Solid Waste Board.—H.L.G.

LETTERS

Great Sport but No Deer

I enjoyed the privilege of using a muzzle loading rifle to hunt in the area west of Staunton (Goshen-Little North Mountain) and hope to be enabled to continue to do so. I hope the season will be increased to 2 weeks covering all lands public and private statewide. Shotguns cripple up more deer and kill more people than rifles. I didn't even see a deer or any signs of a deer on this trip but I hope for better next time.

Jerry Stone
Rockville, Va.

Up the Creek Without an Oar

ON a recent vacation at Smith Mountain Lake, I was shocked to find that rental fishing boats with outboard motors were provided only with a paddle, no oars available on request, at three marinas visited. This is a hazardous situation in case of rising winds and engine failure, especially on large lakes like Smith which develop heavy waves. These flat-bottomed boats are mean to handle with a paddle in a calm, impossible in waves, the time an engine is most likely to fail.

I recommend that places renting rowboat type craft on Virginia lakes be required to provide a usable pair of oars even though outboard gas or electric motor is provided.

H. K. Edwards
Arlington, Va.

Bass Tourneys: Good—Bad?

I was pleased to read in the Roanoke Times that the Game Commission is considering doing something about fishing tournaments. In all my life I have never seen anything so out of control. I have seen as many as 50 dead bass in one wire cage at one boat dock, saving them all week for a 3 p.m. Sunday weigh-in time. Bass fishing was a lot of sport but now they have made work out of it, one person trying to outdo the other. It seems to me they have declared war on the Bass.

Ralph Tilley
Pulaski, Va.

OUR Commission of Game and Inland Fisheries is well aware of the criticism being directed toward bass fishing tournaments. Our biologists feel that a part of the criticism is justified, but that some of it is based upon faulty information. A great many of the fish caught in these tournaments are not removed from the waters where they are caught, except temporarily, but are released unharmed to continue to perform their role as predators in maintaining the species balance in such waters. Our Commission is encouraging all tournaments to require that the fish taken be released rather than killed. We plan to have an article in a forthcoming issue on this subject. Ed.

MADNESS AFTER DARK

By RICHARD PAULEY
Salem

I STRUGGLED up the laurel-tangled ridge, trying to keep up with my two hunting companions. Limbs slapped and cut at my face and hands, and I seemed to step on a frost-covered rock or stick with every step. I wasn't about to complain when Lloyd and George decided to pause, listening for the dogs that had been swallowed up by the inky darkness hours earlier. I was on my first coon hunt, and up to that point I had not been overly excited by the proceedings. However, the events that were to take place in the next few minutes were to open up an entirely new realm of hunting to me.

I had been wanting to go on a coon hunt for some time, and when Lloyd had called earlier in the evening, I had readily accepted his invitation.

"George should be here by 6:15," Lloyd had said, "so just meet us at my house about then."

"Where do you think we will hunt?" I had asked.

"Probably back around Poor Mountain," Lloyd had explained. "That area is pretty tough to hunt, but when you catch a coon back there this late in the season, he is usually a good one."

"Sounds good to me," I had exclaimed. "I'll see you in a little while."

Actually, coon season was in its waning stages in the Roanoke-Montgomery county area, since it was late January, and the season there extends only through the end of the month. Lloyd had fully explained that our chances of catching a coon weren't as good as they might have been a couple of months earlier, but I wasn't really worried. I knew that I would be hunting with two of the most knowledgeable coon hunters in this part of the state, and their dogs were fast becoming legendary throughout western Virginia.

Lloyd Graham and George Hill are indeed fanatic coon hunters, and sportsmen in the truest sense of the word. The two Salem men have hunted together for many years, and have formed a lasting friendship in the process. However, their greatest joys have come about since they acquired their present coon dogs, Lady and Sport. They had heard about the two young dogs from another hunter, and had gone to North Carolina after the season to check out the pair of black and tans. The dogs were litter mates, and from outstanding bloodlines. After a thorough, scrutinizing examination, they knew they had found two dogs with tremendous hunting potential. As only a serious coon hunter can appreciate, they confirmed their optimism by paying several hundred dollars for the pair of dogs. Both men realized that there was an element of risk, but they awaited the opening of coon season with childish anxiousness. If any doubts did exist, they were quickly dispelled once the season got underway. The dogs were in top form and treed coons at an unbelievable pace.

The black and tans were in their second season with Graham and Hill when I was invited to join them, and they had already bettered their previous year's record. I was quite impressed by the actions of the two dogs, as they both radiated confidence in their own hunting ability as well as trust in their owners. Both Lady and Sport were large, broadchested dogs, with sleek, shiny coats. As young as they were, both bore the scars of numerous coon fights on their ears and muzzles and, quite simply, looked like good coon dogs should look.

On that particular night, we had indeed decided to hunt in the Poor Mountain region of Montgomery county, an area noted for its remote and rugged terrain. I had done some grouse and turkey hunting in the area, and although game is not really abundant there, the lack of hunting pressure makes it enjoyable. Most hunters would rather hunt in easier places, but the "hard to hunt" aspect of the mountain is only an added challenge for Graham and Hill.

As I have heard Lloyd say many times, "George and I would rather catch one coon back on the mountain than half a dozen down here in the flats."

We had turned the dogs loose at the mouth of a broad hollow, with a clear, tumbling stream flowing through it. Both Lady and Sport were quickly out of sight, and we casually meandered up the hollow in the general direction they had gone. For over an hour, we walked and talked, and I listened with particular interest as the two hunters relived thrills of past hunts. I was thinking to myself that coon hunting wasn't really so hard after all, when the strike came! Somewhere in the distant darkness, the low bass voice of Sport erupted, and was soon joined by the somewhat higher pitched yelps of Lady.

"Did you hear that, Lloyd?" George yelled.

"Yeah," Lloyd replied. "Sounds like they hit a pretty good track."

I stood spellbound by the eerie sound of the chase, and I tried to absorb all the activity around me.

"Do you think he will tree soon?" I asked.

"By the sound of those dogs, I would say he is going to have to go up pretty fast," Lloyd explained.

The dogs were moving farther away, so we again started up the hollow, and I detected a more purposeful air in the movement of the two hunters. The hollow soon became quite narrow, and degenerated into a mass of laurel and rhododendron tangles. Movement was difficult, but the pace did not slow. Lloyd led the way, and he nimbly picked his way over blown-down trees and through dense thickets without any apparent sign of hardship. As if I wasn't having enough trouble, the dry-cell light I was carrying began to flicker. I enviously glanced at the light units carried by both Lloyd and George. Both men carried tremendously bright lights, attached to a hard protective helmet, with a cord connected to the power source which was attached to their belts. Lloyd had explained that the units were actually inexpensive in the long run, since they were rechargeable, and with good care would last several seasons.

I finally managed to get in position between Lloyd and George, so I could use the reflection of their lights to greatest advantage, and from that point on, walking became much easier.

We finally came to the head of the hollow, and started up the steep side of the ridge. After climbing a short distance above the stream, we again heard the dogs, but the sound of the chase had obviously changed. The dogs were no longer moving, and both emitted throaty bawls that were hard to mistake.

"Has he treed?" I asked.

"Yeah man," said George, "and by the sound of that barking I think they're looking at him."

George explained that if the coon was indeed on the outside, we were fortunate, since late in the season they tend to tree inside a den or other convenient hollow tree. When this happens, there is nothing to do but pull the dogs off, and try to hit another track.

"We have been pretty lucky about treeing them outside so far this year," Lloyd said, "so keep your fingers crossed."

We continued on up the ridge, and the going seemed to get tougher with every step. Every time we stopped to listen, the dogs still seemed a long way off.

"They're right on top," said George.

"When we get up there to the tree, look around at all the saplings and bushes," Lloyd urged.

"What for?" I inquired.

"Those dogs get so worked up when they tree a coon, that they take out their hate on all the chewable trees in every direction," Lloyd explained.

"As long as we have been getting to them, they'll probably have everything within fifty yards of the tree chewed down," George smirked.

With that we struggled on and, after a sweaty twenty minutes, were only a few hundred yards below the bawling dogs.

"Talk to him, man!" Lloyd yelled.

The voices of both dogs took on an even more frenzied pitch with this vocal encouragement, and we quickly scrambled the remaining distance to the tree. George reached the tree first and immediately began scanning the trunk and limbs of the large, gnarled oak for some sign of the coon.

"There he is!" George yelled. "Man, ain't he a hoss!"

Lloyd and I focused our lights on the big coon, and he glanced down at us with no apparent sign of concern.

"He's a nice one all right," Lloyd added.

The coon was only about thirty feet up, and was perched out on the end of a limb. The mad bawling of the dogs, combined with our lights and exclamations, seemed to have no effect at all on the old boy.

Author hoists a nice boar taken after a rugged chase across Ft. Lewis Mountain.

"Looks like we're gonna have to shoot this one out," George said as he surveyed the tree. "Not even Lloyd can climb that one."

"Here Richard, you take the shot." Lloyd said.

I stepped around one of the saplings that had been felled by Sport, and got into a good shooting position. I slipped off the safety and sighted down the barrel toward the coon's shoulder.

"Hold on there!" George screamed. "We don't want to kill him. Shoot right behind his leg, or near his tail. If you hit real close to him or only graze him, he should come out of there."

With these new instructions, I again took aim and squeezed off a shot. The slug struck the limb right behind the coon, and he started down the limb.

Lloyd in the meantime had taken out his coon squawler, and was making the rasping distress cries of a coon. At last the situation became too much for the coon, and he simply sailed out of the tree onto the waiting dogs.

The old coon hit running, and he and the dogs were quickly out of sight. The sounds of the fight filled the night air, and for a while it was hard to tell who was holding the upper hand. We ran and stumbled after the dogs, and when we reached them, it was over.

Lloyd retrieved the coon, which proved to be a large boar with a beautiful pelt. The dogs continued to harass and snarl at the expired animal, and it was quite a while before their fervor subsided.

"Gosh, he sure is heavy," I said, as I hoisted the big animal. "How much do you think he will weigh?"

After another round of hoisting by both hunters, they agreed that the coon would probably weigh close to seventeen pounds. Their guesses were to prove uncanny later, as the animal weighed sixteen and three-quarter pounds on a reliable set of scales.

After more admiration of the old coon and lavish praise for the dogs, we started the three-mile walk back to the truck. Until then I hadn't realized that I was tired and thirsty, but at that point it seemed to make little difference. I was genuinely excited over the events of the hunt, and kept both Lloyd and George busy the rest of the way home answering questions about the chase and coon hunting in general.

"Coon hunting is something that will really grow on you," Lloyd told me. "If a person likes to hunt, then he almost has to like coon hunting."

"One thing about it," said George, "is that night hunting is never crowded, and you can really enjoy the solitude and companionship a lot more."

I readily agreed, and quickly accepted an open invitation to hunt with them again. It was nearly 3:00 a.m. when I arrived home, but my thoughts were still back on a laurel ridge in Montgomery county, listening for those black and tans.

I have hunted with Lloyd and George countless times since that first night, and as Lloyd predicted, the sport has indeed grown on me. Of course I have learned the ins and outs of coon hunting from two of the best in the business, and this has unquestionably added to my enjoyment. The three of us have experienced many interesting hunts together, and I have learned that coons are not always an easy quarry.

Lloyd and George hunt throughout western Virginia but like to concentrate on areas close to home, especially areas in Roanoke and Montgomery counties. Both men belong to the Blue Ridge 'Coon Hunters Club, located near Ellet, and their membership proves invaluable during the year. Belonging to the club enables them to fraternize with some seventy other coon enthusiasts, as well as keep their dogs sharp with water races and competition hunts.

Like most other hunters, Graham and Hill have certain goals, and the most important to them is to continue to improve the quality of their dogs. Another less important, but ever present goal is to catch a coon weighing over twenty pounds. They have caught one coon in the 19-pound class, and several weighing over 18 pounds.

Coon hunting is something that may sound insane to a non-hunter, and I admit that it helps to be a little crazy to hunt them. However, the pleasures derived from pursuing them outweigh any discomforts encountered along the way. There is something about resting on top of a wind-swept mountain in the dead of night, listening to the sounds of a good chase, that really gets to you. I have always felt closer to nature while hunting at night, and I come away from every hunt strangely relaxed and rejuvenated. My family has come to accept my hopeless addiction, and my wife will probably not be surprised if a small black-and-tan addition is soon made to our household.

VIRGINIA'S WINTER HEAVYWEIGHTS

When striper action slows in mid-winter, muskellunge take up the slack for the remainder of the winter. Author Elkins admires a handsome specimen.

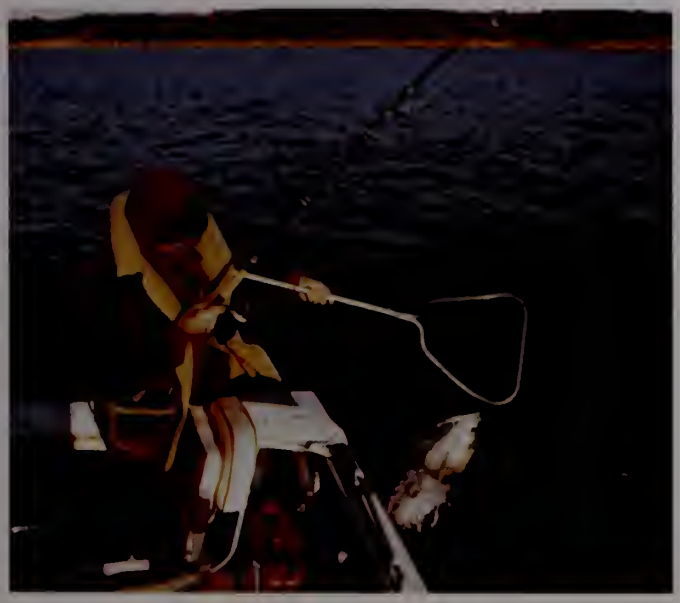
By PETE ELKINS

AN old proverb counsels "To lengthen thy life, lessen thy meals." A Virginia angler could well alter the proverb to read "To lengthen thy fishing, lessen thy dislike of cold weather."

Some of Virginia's finest fishing begins when most anglers have traded in their rods for shotguns on Saturday and the Redskins on Sunday. Not only is winter fishing highly productive, but it also stirs Virginia's two largest freshwater gamefish: The landlocked strain of striped bass and the fabled muskellunge.

Both of these scrappers frequently exceed the twenty pound mark. Both species luxuriate in cold winter weather. The striper is the more popular of the two primarily because of its greater population density in any given body of water. Even in good muskie waters, a skilled angler may go days, even weeks, without a strike. However, in lakes like Kerr Reservoir, any reasonably proficient fisherman can expect to tangle with a striped bass.

Barker Stein, heavily bundled against winter winds, nets a 10 pound Kerr Reservoir striper.



Freshwater striper fishing in Virginia is divided into two very distinct phases. During the annual spring spawning runs up the Roanoke and Dan Rivers, fishermen seek the stripers in April and May warmth.

After completion of spawning, the stripers drift back downriver into the open waters of Kerr Reservoir. From then until late fall, with the exception of sporadic surface activity in July, the stripers are relatively unnoticed. But with the arrival of cold autumn nights, these linesided creatures begin to stir once again. By November, the stripers are actively feeding on the myriad shad schools within Kerr. Early and late in the day produces explosive "jump-fishing" for the oversized silver fish.

Striper action at Kerr continues well into the winter, with most of the action centralized between the Rt. 58 Bridge at Clarksville and the Pumping Station a mile or so below the bridge.

Trolling is the accepted method for winter stripers. A depthfinder is invaluable, not for locating the stripers themselves, but rather for pinpointing concentrations of shad, the predominant forage species for the predatory striper. The shad will show as a flourish of red flashes across the depthfinder dial between 5 and 20 feet below the surface.

There are many productive trolling lures on the market. The only requisite for stripers lures is that they run deep at a relatively slow trolling speed. I prefer the long plastic-billed Rebel plugs with blue backs. These lures have produced for me, but other anglers prefer deep-running cordell "Redfins," Bomber "Waterdogs," or bucktail jigs.

Author's Lab, Satin, is unimpressed with this fifteen pound James River muskie taken in late January.

Trolling tackle need not be overly heavy. In fact, bass tackle is ideally suited for winter stripers. In truth, cold weather stripers are not impressive battlers until they near the boat. Only then do they behave like spring or summer stripers. As soon as the striper belts the lure, the angler can expect a hard series of head-shaking runs, with an overall sensation of weight and power, not speed. Don't try to stop these initial runs! You would be risking a ripped-out or even straightened hook. When the striper nears the boat, stay alert for short, bullish sprints away from the waiting net. Although not a surface fighter in any sense of the word, an almost-beaten striper can stage an impressive show of tail splashing and frothy rolling.

Nets are the favored landing device at Kerr. A large diameter hoop is essential. *If* an angler is familiar with the proper use of a gaff, that effective tool will avoid the danger of hooks getting tangled in a net before the striper is within the meshes.

Although winter striper action in Virginia is now centered on Kerr Reservoir, the ambitious striper stocking program of the Commission of Game and Inland Fisheries may soon spread the action to other Virginia waters. Smith Mountain Lake is already becoming a productive striper reservoir.

Under the skilled hands of biologist Bill Neal, Virginia's "striped bass midwife" (as outdoor writer Bill Cochran labels him), the striper hatchery on the Roanoke River at Brookneal is developing the potential to make Virginia a freshwater striped bass hotspot. In 1972 alone, fifty million striped bass fry were shipped from the Brookneal hatchery to other states in exchange for northern pike and walleye fry. The Brookneal hatchery is one of only two hatcheries in the world which deals with purely freshwater striper populations. (The other hatchery is in Oklahoma.)

The already good Smith Mountain striper fishing has evolved from an initial stocking of forty to sixty thousand two to three inch fingerlings. Sprawling Lake Anna, north of Richmond, received 96,000 fry in a summer stocking during 1973. Lake Anna anglers are eagerly awaiting the results, which should appear after two years in the form of eighteen inch striped bass.

Freshwater striped bass are physiologically identical with their saltwater cousins, with one major exception: the freshwater fish grow almost twice as fast. This phenomenal growth disparity arises from the top of the ladder niche of the freshwater striper in a lake's food chain. In comparison, a briny striper must compete with many other predators at its own level in the food cycle.

Winter fishermen on Kerr Reservoir enjoy the result of the freshwater stripers' successful climb to the top of the fishy social ladder. Most stripers taken by trollers in November, December, and early January (weather permitting) will average from ten to fifteen pounds. That takes all of the chill out of a wintry day!

However, to guard against the cold during the in-between strike periods, heavy wind-proof clothing is essential. Insulated suits and boots like those worn by

Striped bass offer freshwater anglers heavyweight action during early and mid-winter. Winter striped bass are susceptible to deep-trolled lures in freshwater lakes.

Casting big rebel plugs or hellbenders to shoreline cover along the James River in late winter is one way to hook an elusive muskie.

snow mobilers make ideal garb for winter fishermen. A ski mask covering most of the angler's face will take the numbing chill from a December wind. A mask will be most appreciated when the boat is moving under power.

Most striper-wise Kerr anglers always have an easily-reached rod ready, rigged with a bucktail jig or some other lure which can be cast for distance. Schooling stripers may explode on the surface at any time. Once up, their stay is often short; thus, every minute counts. Be ready. Keep a rod rigged for instant use.

With the arrival of January's sometime bitter weather, the striper angler may switch to the second member of Virginia's winter heavyweight pair. Most muskellunge are caught during the bleakest days of January, February, and early March.

Don't expect as much action with muskies as you enjoyed with winter stripers. Muskies are an aloof breed, cold, menacing, and unpredictable. There are a few muskie "experts" haunting Virginia waters, but they're a close-mouthed breed, shunning writers and photographers just as they would stunted bluegills.

The best bet for the Virginia angler under the compulsion of a muskie mania is to head for a proven area and prepare to spend some time on the water.

Burke Lake in Fairfax County is currently probably Virginia's best muskie area. Rental boats are available at Burke. Gasoline motors are prohibited, but electrics are ideal. Burke muskie fishing is a trolling game. Deep-divers like hellbenders, waterdogs, bombers, etc. are the producers. Concentrate your efforts on areas near drop-offs or sudden changes in the lake bottom's topography.

Next to Burke Lake, the upper James River is the most likely spot to hook a toothy muskellunge. After the much-touted muskie explosion of a few years ago, the James River action above Buchanan has settled down to a scattered muskie taken here and there. However, one strongly suspects that the decline in creeled muskies from the James is primarily the result of scant fishing pressure.

River fishing in late winter is bone-chilling business. It's wet, uncomfortable and often slow. But when the strike comes, as come it will if you keep casting intelligently, all of the discomfort will disappear.

Winter fishing isn't the pleasant "great-to-be-alive" freshness of spring or summer angling. Winter fishing isn't for the entire family, or even for every fisherman. Winter fishing is for those who like the surge of a heavy fish against an icy reel spool, for those who savor the flaring turn of a pair of black ducks around the end of a windswept point, and for those who would otherwise only pace the floor on a Sunday afternoon restless for the shiver of cold water on a faraway lake.

THE BEST OF KESTELOO

Commission Photographer Leon Kesteloo, whose photos have enlivened the pages of Virginia Wildlife for nearly 24 years, will be retiring at the end of this month. His true-to-life wildlife photos like those on this page have appeared in publications for and wide. Although we will no doubt continue to use his excellent wildlife shots for years to come, we and our readers will miss his creative additions to our photo files.

VIRGINIA WILDLIFE ☆ ☆ ☆ ☆

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

CONSERVATION COURSE ANNOUNCED. Three weeks of classes on Virginia's natural resources will be offered at several colleges throughout the Old Dominion next summer. The intensive, fast paced study sessions are designed for teachers but may be taken by other individuals. The course covers five subjects: geology, marine life, soil and water, forests and wildlife. Although some basic material is presented on each subject, the main emphasis is on the subject as it pertains to Virginia.

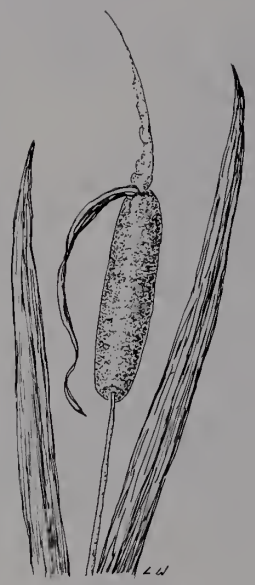
This year's classes are scheduled at sessions at Virginia Polytechnic Institute and State University from July 17 to July 3; Madison College, July 8 to July 26; Virginia State College, July 15 to August 2; and the College of William and Mary from July 22 to August 9, 1974. More information on the natural resources course can be obtained by writing the Virginia Resource-Use Education Council, c/o E. W. Mundie, Seitz Hall, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

HOW ABOUT ADOPTING A SWAMP? According to Environment News an ambitions program to protect some 234 prime natural areas -- ranging from small swamps to extensive river stretches -- around Chesapeake Bay has been initiated by the Nature Conservancy. The areas were among hundreds nominated for Conservancy attention as a result of a survey of Chesapeake Bay natural areas undertaken by the Smithsonian Institution under contract to the Conservancy and the Chesapeake Bay Foundation. The Conservancy is now launching its preservation program and wants individuals and organizations to "adopt" specific areas. William F. Nickel, III, program coordinator, says the Conservancy is seeking information and advice on what land preservation methods would be most effective for each area.

As a product of the inventory of the Bay, there is now a computerized data bank on the area.s plant and animal life, including the locations of heron, osprey and eagle nests, fish spawning grounds and, for the first time, areas with rare and endangered plant species and particularly outstanding plant specimens.

MID-DECEMBER REPORT SHOWS DEER HARVEST UP. Early reports on the 1973-74 deer hunting season indicate that the harvest will be up somewhat from last year. Some 3,401 deer were taken in the Jefferson Forest area by mid-December, many of these coming from Botetourt County. Bath County was also a good producer with 1,737 animals which brought the area's (five counties) total to over five thousand. Rockingham County hunters reported taking 2,203 deer and in the surrounding six county area 5,339 deer were harvested. Reports are also in on Virginia's first muzzle loading weapons season and show that 24 deer were taken on the Game Commission's three wildlife management areas that were open early for this type of hunting.

YOU CAN'T WIN DEPARTMENT. With the fuel crunch going full throttle many concerned citizens are taking to the bicycle as a non-consuming form of transportation--- at the same time the U. S. Consumer Product Safety Commission puts bicycles number one on their list of most hazardous products on the American market.



In Natures Garden

The Common Cattail

By Elizabeth Murray

Charlottesville

Illustrated by Lucile Walton

By December, when so many of the leaves have fallen, and so much of the vegetation died back, the ponds and marshy areas of the countryside begin to stand out in sharper profile than during the summer. There seem to be far more of these small bodies of standing water than one realized earlier in the season. They become noticeable at the sides of roads, at the edges of woods and in low-lying fields. And many of these ponds and swamps boast magnificent stands of cattails.

Cattails are monocotyledons. Their family, the Typhaceae, is usually the first of the class to be considered in a flower book, and hence *Typha,* the cattail, is frequently the first flower to be described. The staminate (male) and pistillate (female) flowers are borne on the same flower stalk but in separate groups, and they mature progressively down the stem. The brown, compact, cylindrical head, which is responsible for the name cattail, is a dense mass of hundreds of minute female flowers and, later, fruits. The numerous male flowers are on the spike above the "cattail" but disappear soon after the pollen is shed. In *Typha latifolia,* the common cattail, male and female parts of the spike are contiguous. In the narrow-leaved cattail, *T. angustifolia,* there is a short gap between the two kinds of flowers. The leaves of the common cattail can be about an inch wide, flat, and a pale greyish green in color. Those of *T. angustifolia* are narrower, somewhat convex on the back, and a brighter green.

The common cattail is found from Newfoundland to Alaska and throughout much of the United States down to Mexico. In Virginia it flowers from May to July, but the brown cylindrical heads remain on the stalk all winter. They are crumbly to touch but if they are brought into the house and sprayed with hair lacquer, they will last a long time and make attractive decorations.

The cattail is also known by several other names, cattail flag, reed mace and in French Canada "massette," meaning simply reed mace and "quenouille" which is the French word for a distaff, a post (more especially a bed-post) and a pyramid-shaped fruit tree. The generic name *Typha* comes from the Greek word *typhe,* which means a plant used for stuffing beds and hence hairy or fuzzy.

Although the cattail has no particular commercial value, the *American Book of the Woods* is full of the uses to which the plant can be put. The dry seed heads on their long stems, reinforced with wire at the base, furnish the best torches which can be made from our native plants. The seed down can be soaked in oil to make tinder, and if the old leaves are dry enough, they make quite good kindling. Mucilage from the cattail stalk is a good adhesive. The leaves can be bound together to make serviceable brooms. The leaves were also sometimes inserted between the staves of wooden barrels to aid in making the seams waterproof when the barrels were filled with liquid. The seed down can be used as a swab or calk (not, I should have thought, very efficiently). A further use for the leaves is in thatching and flooring. Mattresses and pillows can be stuffed with the seed down, although, as the book very properly points out, the down is so fine that it may sift through the meshes of ordinary cloth and cause catarrhal irritation.

Many parts of the cattail are edible. Euell Gibbons, the well-known writer on wild food, calls cattails "the supermarket of the swamps." The young bloom spikes make a tasty cooked vegetable, and the rootstock provides an excellent source of starch. He claims he can use the pollen for pancake flour, but I think I would have to eat one of the pancakes before I could wholeheartedly accept this! The stalk I know can be peeled and eaten raw, although I must confess that I do not find it quite as delicious as the really dedicated "foragers" assert.

Mr. and Mrs. Gibbons performed an interesting experiment a few years ago. They took a group of children for two weeks to a small island off the coast of Maine and lived almost exclusively on the food which they gathered on and around the island. They caught lots of seafood, clams, mussels, crabs, mackerel. They picked a lot of wild plants for vegetables, ate cranberries and bayberries for dessert—and were delighted to find cattails on the island to add to their menu in many different ways.

It seems that if you are lost out in the wilds, far from shelter or a source of food, one solution is to head for a swamp with a good clump of *Typha* and you will have almost everything you require. But even if you are in the heart of civilization, well-nourished and not in need of any survival measures, you can take the time to admire a fine stand of cattails as you are passing by.

A GUIDE TO FEEDING BIRDS

By JOSEPH J. SHOMON*
Woodside, New York

THERE is little question among wildlife biologists about the value of augmenting the natural food supply of birds. Habitat improvement to increase *natural* plant and animal foods has been encouraged for a long time, and done properly, pays off. Few knowledgeable persons would argue about the relative merits of wildlife borders, overgrown fencerows, annual food plots, the practice of strip mowing in fields and meadows at staggered periods, the use of artificial ponds and waterholes, etc., to aid game and non-game species. All these can be helpful and need to be encouraged. But what about the artificial feeding of non-game species, particularly the so-called song and insectivorous birds? Is this a good practice?

The question, of course, cannot be answered categorically with a yes or no because little research has been done on the subject. Much that is known or advocated is simply that of personal observation and opinion. Many people wonder, for example, if the National Audubon Society has a policy on the feeding of birds, especially with regard to such matters as when to feed, when not to, the best types of bird feeders, the best foods, etc. It does not. This again is because so little scientific work has been done on this aspect of wildlife. Fortunately, at this writing, a beginning effort is being made in this direction. Underway is the formation and development of a private center (called Glenelg) devoted almost entirely to the study of urban wildlife with a particular emphasis on non-game birds in urban and suburban settings.

There is one aspect of bird feeding about which there is little doubt, and that is that bird feeding certainly has its value to people. The practice surely is an enjoyable activity to the one who does the feeding. Simply watching the birds come to your feeding station can be a joy. Also, one of the best ways to study birds is by observing them carefully when they come to a feeder. Moreover, the more one learns about birds the better the chances his or her interests will broaden to include other wildlife. And of course there is always the possibility that when feeding is done properly the effort may indeed be doing the birds some good.

It is estimated that there are some 9 to 10 million serious bird enthusiasts in America, and their numbers are growing. Of these many hundreds of thousands go in for serious bird feeding. Also, the bird seed business is a big one in our country and adds substantially to our economy. Surely, then, with so much interest in birds it is well to provide some guidelines on the subject.

When to Feed

One of the foremost principles in bird feeding is to feed when it is apparent that the birds need food. To most people the answer is in the winter when the cold comes, especially when ice and snow cover the ground. Actually, the best time to begin is long before cold weather starts. The idea is to hold birds around late in the fall when they are migrating southward. If they find sufficient food around, many will stay: some may remain even all winter. This permits you to enjoy them that much longer. So a cardinal rule is to *start feeding in the late fall or quite early in the winter when the birds are on the move.* Attract the birds to your grounds and they will remain with you all winter and into the spring; some may stay all the year.

The second important rule is to *feed daily and consistently.* Once you start the feeding practice, better

(Continued overleaf)

* After 13 years the author has just retired as director of the Nature Centers Planning Division of the National Audubon Society; earlier he served for 15 years as chief of the education division and editor of *Virginia Wildlife* for the Virginia Commission of Game and Inland Fisheries.

White-breasted Nuthatch
Tufted
Carolina Chickadee
Downy Woodpecker
Quail
English Sparrow
Mourning Dove
Song Sparrow
Junco
JOHN W. TAYLOR

Cardinal
Purple Finch
Mockingbird
Goldfinch
Towhee

keep it up until natural foods become abundant again in the spring. If you leave your premises for part of the winter, then don't begin feeding at all, unless you can get a neighbor or someone to do the daily feeding for you. Birds are creatures of high metabolism and must have daily food; some species require food almost constantly during their active, wakeful hours.

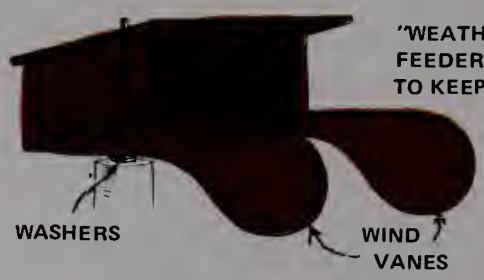
Where to Feed and Feed Dispensers

Feeding birds is quite simple, and no elaborate feeders are necessary. Fancy-looking feeders are mostly for the whims of people; birds certainly do not need them. Scattering feed on the ground under a large tree, preferably a conifer which gives some protection from ice and snow, is perfectly all right. The ground should be bare and quite dry and free from hiding places for predators. Dr. Alraed Geis of the Patuxent Wildlife Research Station says that his ground feeding area outside his living room window provides an excellent setting for the feeding of birds much better than any artificial feeder he could devise. He fancies no special feeders and gets unbelievable numbers of birds to his home. Other people find windowsill board feeders effective, especially where a house has metal vertical windows which swing outward. One merely has to open the window a few inches, toss out a handful of seed and the feeder is replenished and in business. Many other types of feeders can be used, either constructed at home or purchased, and all seem to work. One of the best is a long board, 8 to 10 feet long and some 10 or 12 inches wide, protected by cleats along the edges and mounted on two six-foot posts. A roof board is optional. It needs to be situated in the open some 15 or 20 feet from your front room or picture window. Squirrels and chipmunks will often come and take their share of the feed, which may not be so disconcerting either to those who like to see other wildlife around. If these animals get too troublesome then there are all types of guards and devices one can devise or purchase to discourage the little "stealers." Birds, like the woodpeckers, creepers, nuthatches, find their food along the trunks of trees. Food for them should be placed on small platforms onto the trees themselves, or in wire meshes attached to tree trunks, or in natural trunk cavities.

Bird Foods

There are many different bird food mixtures on the market ranging from plain sunflower seeds to fancy, attractive mixtures—enough to make any bird fancier's head spin. All are good for the various birds they are supposed to serve. There is nothing wrong with buying such foods provided your pocketbook can stand it. If you are prone to stretch your dollar, then the simpler the foods the better. Actually, plain old cracked corn is hard to beat for most birds. It doesn't look very attractive in a clear plastic bag, is somewhat dusty, but so far as food value goes, it is tops. The same can be said to a lesser degree for milo, soybeans, rye, buckwheat, and barley. If your pocketbook is real tight, why not simply feed scraps from your kitchen. Crumbs from old bread, buns, pastries are excellent. Leftover noodles, potatoes, other vegetables, scraps of meat—all make fine tidbits for birds. Suet, of course, is excellent for the so-called insect feeders, and great chunks of it can usually be obtained from your butcher at small or no cost. Moreover, you can make your own bird food from suet or fat by saving all kitchen fats and oils, hardening it in a can in the refrigerator, then mixing other meat scraps in it. Also, used soup bones with gristle are great for some tree birds. Apple peelings, raisins, bananas, and other fruits are great for others; so are peanut butter and old fruit squeezings. Sugar water is a must for the hummingbirds.

So, bird feeding is pretty much what you make it. It can be great educational fun; is nearly always a fascinating pastime; and, who knows, you may be doing the birds a lot of good, too.



"WEATHER–VANE" FEEDER PIVOTS ON IRON ROD TO KEEP OPEN SIDE DOWNWIND.

SHORT LOG HUNG ON WIRE MAKES NATURAL FEEDER. PACK 1" HOLES WITH SUET, OR PEANUT BUTTER.

FEEDS AND PRIME CUSTOMERS

Suet	Woodpeckers, nuthatches
Sunflower seed	Cardinals, grosbeaks
Peanut butter	Mockingbirds, creepers
Raisins	Mockingbirds, nuthatches
Chick scratch	Sparrows, juncos
Table scraps	Jays, mockingbirds
Cracked corn	Cardinals, doves
Bread	Starlings, blackbirds
Cracked nuts	Chickadees, creepers
Commercial mix	most of above except suet and raisen eaters.

HOPPER TYPE–GLASS FRONT

GRAND OL' GROUNDHOG

ROBERT LEO SMITH

HOW the groundhog earned his reputation as a weather prophet is something of a mystery. Legend—as everyone knows—has it that the groundhog emerges from his den on the second of February each year to survey the weather and the prospects for the rest of the winter. If he sees his shadow, winter will last another six weeks. Actually there is no basis in fact that the groundhog emerges on the second of February, but he does later in the month. In all probability, the legend came to America from Europe with the Pilgrims. In Europe the insectivorous hedgehog, also a hibernator, was once endowed with the same ability to forecast weather. Finding no hedgehogs in Massachusetts, the Pilgrims apparently transferred the story to the groundhog.

Sunny or clear, warm or cold, the chances are pretty good that on Feb. 2, the groundhog is still sleeping away in his bedchamber a couple of feet beneath the ground. He has been there all winter, comfortably waiting out the cold and snow and looking forward to spring.

The groundhog entered his burrow back in October, while the leaves were still drifting down from the trees.

The sequence of events that led up to his long sleep were probably triggered by the woodchuck's biological clock, that marvelous time-keeping mechanism we all possess, that, computer-like, initiated the first stage. The shortening days of late summer and early fall set the groundhog to eating not just three square meals of grass and clover a day, but meal after meal of the stuff. As one would expect, he became rolling fat.

The heavy layer of fat will be the only food the woodchuck has available during the winter. On that fat alone he has to sustain life. By the first frosts the woodchuck has stopped eating although he may gnaw on grass or an apple occasionally. This period of starvation is the next step towards his deep sleep. It gives his alimentary tract a chance to be completely evacuated.

The onset of winter dormancy then comes on in a series of drowsy steps. One day in late September or early October, the animal will enter the burrow and sleep for awhile. At this time the temperature of the woodchuck drops a number of degrees, remains at that point for awhile and then rises to a normal body temperature again. The next day the woodchuck again enters hibernation and his body temperature drops even lower. After a few such fitful starts at complete dormancy, the animal finally curls up to sleep. In this state of suspended animation only the vital life of the animal continues, maintained by shallow breathing, slow circulation and a continual digestion of the stored body fat.

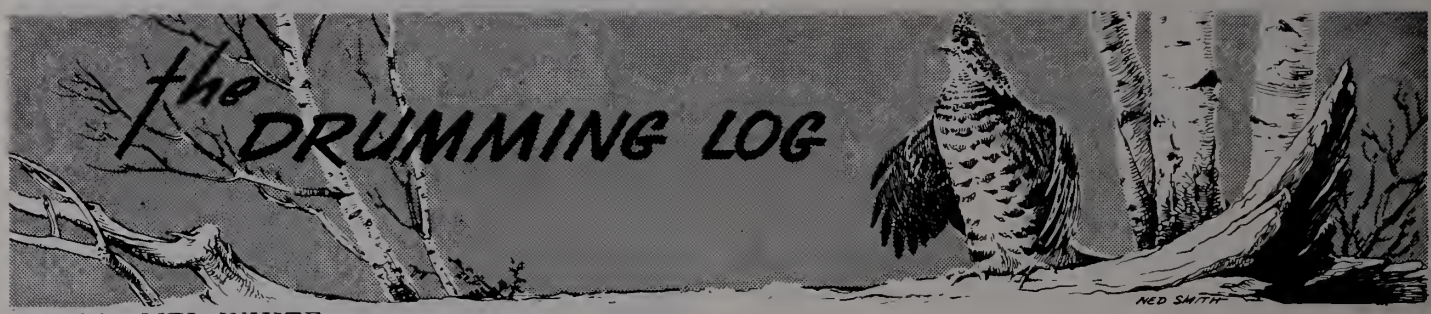
Mammalian hibernators, including the woodchuck, do not remain completely inactive all winter. The groundhog awakens about once every week or 10 days and breathes deeply to clear his respiratory system of accumulated waste from metabolism and perhaps void some wastes. Thus the groundhog might arouse on February 2, and come out, but don't count on it.

Just as he went through a certain process to enter into hibernation, the woodchuck goes through a certain but much faster, almost explosive, process to come out of dormancy. The pulse rate leaps to 200 beats per minute. The remaining fat reserves are burned up so speedily that the groundhog may be back to his normal body temperature of 97 degrees within two hours.

When the groundhog comes out in late February, he, surprisingly, is not really interested in eating clover, which won't be available for a few weeks yet. Instead, the males are out searching for females and vice versa. Late winter snows may tell the story of where the paths of two males crossed and a fight ensued: or of where the male met the object of his search.

So what if the groundhog didn't come out on Feb. 2? His whole winter's sleep and his subsequent emergence are still interesting enough to keep this day reserved for him. Someone needs to remind us that wildlife, too, is still hanging on out there through the dreary winter, and who better than a sleepy groundhog?

Reprinted from Wonderful West Virginia, March, 1973.



Edited by MEL WHITE

WALTER ROBBINS, SECRETARY-TREASURER of the Elk Creek Valley Game and Fish Protective Association, is flanked here by Game Refuge Supervisors, James D. Halsee and Virgil C. Boone. The Commission supplied labor and equipment to seed six acres of Grayson County for wildlife support which the association sponsored.

GRAYSON GROUPS WORK FOR WILDLIFE

Working in conjunction with the Commission of Game and Inland Fisheries, the Elk Creek Game and Fish Protector Association and the New River Wildlife and Conservation Club recently worked to restore acreage in grain that will support wildlife in Grayson County.

The Elk Creek group appropriated $200.00 from the Grayson County Board of Supervisors to buy the grass, seed and fertilizers needed for the project. The money was granted from surplus deer damage stamp money.

The Game Commission supplied labor and equipment to enable the organization to plant six acre size wildlife plots. A combination of game bird mix, white clover, bluegrass and red top were planted. All these seeded well and should be the beginning of a successful plant conservation cycle.

The New River Club planted about four acres on the Grayson-Carroll line which produced a good crop. The club also assisted the Forest Service in planting 10,000 Autumn Olive and 500 Bi-colored Lespedeza plants.

According to Game Commission Biologist, Gary Spiers, the food and cover plot plantings are more practical than purchasing extra wildlife with the same money used for the projects. In his opinion, the sites do more in the way of balancing Virginia wildlife than filling areas with game that will upset that balance.

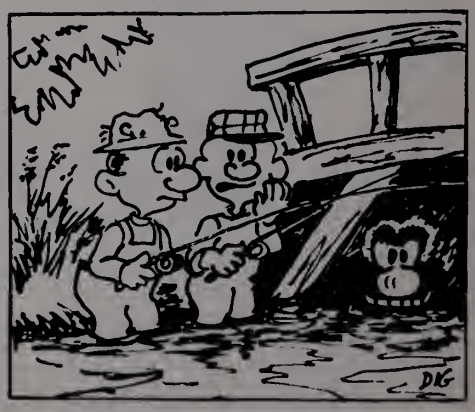
WHOOPERS MAKE IT

Wildlife observers were relieved when it was noted in November that the major portion of the world's whooping crane population had arrived safely on the Aransas National Wildlife Refuge on the Gulf Coast of Texas.

By November 8 there were 41 adult and two young birds at the refuge. Last year's total count showed 51 wild birds—this along with 21 birds in captivity are all that remains of the species.

The big cranes winter at Wood Buffalo National Park in Canada, where observers report that only three young were reared this year.

BILL HAIRFIELD took this 23 pound channel catfish on squid while night fishing on Chickahominy Lake this fall. The fish is the largest channel cat ever taken from Chickahominy Lake.



THE FISHING'S GREAT HERE—BUT WATCH OUT FOR THE TROLL!

DUCKS AROUND THE BEND

By BILL MARTIN
Lexington

YOU'VE never been cold unless you've shivered in an aluminum johnboat on a January river waiting for the black cold to change to frozen dawn. Then when it's light enough to keep the shooting legal, you push a brittle paddle through the skim ice and swing out into the current. I was paddling from the stern, looking over Dick Rabun's chill-hunched shoulders at the grey water. Ice kept forming on my gloves and paddle, making it difficult to hug the inside bank. A raccoon gave us an astonished look, then plodded back into the brush. We drifted around the next bend, tight against the bank, and suddenly there they were! Three black ducks fifty yards ahead. Barely breathing, I tried to hold the bow straight on them to minimize our silhouette. But they saw us, maybe a flash of the paddle blade, and leaped into the air out of range. For some reason, they turned, headed upriver directly toward us. Not a motion from the johnboat. Only the current moving and the blacks landing on the water thirty feet away. When they jumped again, Dick fired as the lead black reached the top of its climb. At the shot, the duck crumpled sideways.

Of all forms of duck hunting, floating a river is the most exciting. It's also often the most productive, and certainly the least expensive. Brushy southern rivers are ideally suited for jumpshooting from a johnboat or other stable boat. Some hunters favor more manueverable canoes, increasing their stability with small pontoon outriggers. However, the johnboat is my first choice since its shallow draft and extreme stability make an ideal gunning platform. It's a wise idea to check the Virginia migratory waterfowl regulations before embarking on a jumpshooting trip. A camouflaged boat is classified as a "floating blind" and must be licensed unless used on waters west of Interstate 95. The regulations are fairly complex and should be carefully read.

The duck boat should be drably painted, either a camouflage pattern or a dull brown. Your chances of approaching a group of wary black ducks are greatly

Floating close to the bank allows the hunter to pop up on shore feeding ducks unexpectedly, making for fast and exciting action, but resting ducks sometimes choose mid-river pools.

enhanced by mounting a camouflage screen of cloth or grass-thatched chickenwire on the bow of the boat. The camouflaged bow blind should be high enough to shield the gunner from the ducks' waterline observation, yet low enough to permit an unhampered shotgun swing.

Camouflage is an obvious necessity for the hunters as well as the boat. The same camouflage suit that you wore for dove shooting is fine if it is large enough to go over insulated underwear and warm clothing. A camouflage face mask is also advisable. Sharp-eyed river ducks can spot the white flash of a hunter's cheeks three bends away. Even a paddle should be painted a drab shade. One's gear for duck floating should also include a pair of insulated hip boots, useful for decoys (more about that later) and retrieving downed ducks or dragging the boat over too-shallow riffles. Of course, a good Lab would solve the retrieving problem. Essentially, jump shooting involves drifting silently with the current, staying close against the inside bank of the river. If the hunters don't talk, or move, or rap a paddle against the gunwales or grate across a submerged rock, ducks can usually be approached within range before they vault into the air in that heart-stopping way that distinguishes puddle ducks from diving ducks.

Puddle ducks are the mainstay of the river jump hunter. The black duck and mallard are the largest and most common game encountered. Both of these plump ducks will average two to four pounds. Wood ducks round out the list of river ducks normally encountered by the southern float hunter.

One word of caution: with increasingly stringent bag limits, duck hunters must be able to identify the various species of waterfowl. If you can't immediately identify a duck when it splashes into the air, then leave your shotgun at home. There are many excellent field guides for waterfowl in book stores.

Identification problems are but one of the challenges spicing jumpshooting. There are also certain dangers inherent in shooting from an often icy johnboat. A spill into a deep hole can be fatal for a hunter clad in heavy boots, bulky clothing, and weighted down with shell-stuffed pockets. Cold water quickly takes its toll, so it's wise to wear a life preserver or floatation jacket if you're addicted to ducks and river bends. It's also much safer if only one man handles a gun, preferably the hunter at the bow. The other hunter should handle the boat. My personal rule is that one shotgun is always empty and cased. After the bow man has had an opportunity for a shot, trade off on the paddle. Shooting from a motor-propelled boat is bad form, highly illegal, and labels you as an outright slob!

Jump shooting doesn't normally result in as many expended hulls as conventional shotgunning over decoys or pass shooting. Yet it's an exciting type of hunting, with all the ever-changing wonder of any drift down a moving river. Jump shooting ducks from a johnboat may be compared to grouse shooting. The shots

are close, fast, and dramatic. Feed your shotgun with hulls carrying #5 or #6 shot. You'll probably find that your percentage of hits will be much higher than in pass shooting. If the weather is really bad, an improved cylinder barrel may not be out of place on a duck river.

Generally, the worse the weather, the better the hunting. High water makes for better shooting. The high water usually floods the banks, allowing the ducks to rest behind brush and trees. This means that the boat is often virtually on top of the ducks before they flush. During calm, low-water periods, ducks will often rest in the middle of pools out in the current. Attempting to get within scattergun range of a black under those circumstances is an exercise in frustration. Obviously, high water also demands caution and common sense as far as boat handling is concerned.

If the weather is just right—terrible, that is—carry along some decoys. A dozen will suffice. Spread them in the eddy water below an island or in a backwater. Camouflage your boat and yourselves, then wait for ducks trading up and down the river to eyeball your decoys. If the deeks look O.K., and you look as though you're not there, then stand by for some action.

If you want the black ducks to drop into your decoys, everything has to be perfect. An acquaintance of mine still talks about a day on the James River near Scottsville, Virginia, when the wind was high and cold, blowing snow low across the river, and the ducks welcomed his decoys like lost friends, dropping into the deeks out of the gray sky throughout the afternoon.

But the blacks were slyer than their mallard and wood duck cousins. No dropping trustfully into the decoys for them. They circled the spread several times, then disappeared around the head of the island. There they landed, and drifted back toward the decoys, carefully checking out the shoreline on the way down.

Black ducks are the spirit of river hunting. You'll find them on frozen days around a river bend.

Dick reaches to retrieve a fat river mallard, a tasty bonus for an interesting and exciting day on the river.

The wary black duck is the mainstay of river shooting, supplemented by mallards and woodies. With today's restrictive bags on these species, the hunter is well advised to stay off the river until he masters his duck identification.

Know Your COMMISSIONERS

DOCTOR ALLAN A. HOFFMAN

Text & Photos by F. N. Satterlee, Information Officer

Born in New York State, Dr. Allan Hoffman was raised in the town of Glen Rock, New Jersey, and attended High School in Ridgeway, N.J. Early in his maturing years he became interested in fishing and in medicine. Both of these interests play an important part in his life today; one as a vocation and the other as a hobby and avocation.

After graduation from High School he attended Princeton University where he received a degree in Biology. Harvard Medical School was next and in 1960 he received his M.D. from that institution. Next he spent one year of his residency at the University Hospital in Cleveland, Ohio. This was followed by two-years active duty with the U.S. Army. He returned to Cleveland and completed his residency in Urological Surgery in 1967. Since that time, Dr. Hoffman has been in private practice in Urology in the Danville, Va., Urological Clinic. He is also Attending Urologist at the Danville Memorial Hospital and a consultant in Urology at the Annie Penn Memorial Hospital in Reidsville, North Carolina.

Dr. Hoffman enjoys all aspects of outdoor life and sports, is by his own analysis "just an average dove shot," but his real love is fly fishing. He has caught 27 different species of fresh *and* salt water game fish using a fly rod and has fished for a variety of fish from Labrador to British Honduras, and from Korea to Hawaii.

In 1970 he was appointed as Fifth Congressional District representative on the Game Commission by Governor Linwood Holton, and on July 13, 1972, was elected as Chairman of the ten-member body.

Dr. Hoffman deems it a privilege to serve the Commonwealth on the Game Commission and bring the best scientific resources to bear on the preservation and development of the wildlife resources of Virginia. He is also especially interested in the preservation of Virginia's natural systems and developing facilities for intensive management of fisheries of the impounded waters of the state.

He is married to the former Jette Lynn Mohr of Glen Rock, New Jersey. Dr. and Mrs. Hoffman have two children, Ian, aged 9, and Alexandra-Leigh, 5, and make their home on Hawthorne Drive in Danville, Virginia.

Dr. Hoffman is an avid fisherman and his boat is a familiar sight on Smith Mountain Lake, one of his favorite fishing spots.

Edited by JIM KERRICK

VIRGINIA COMMISSION OF GAME & INLAND FISHERIES
VIRGINIA BOATING ACCIDENT REPORT

The operator of every vessel involved is required to file a report in writing whenever a boating accident results in loss of life; loss of consciousness, medical treatment or disability in excess of 24 hours or property damage in excess of $100. Reports in death and injury cases must be submitted within 48 hours; reports in other cases are required within 5 days. All reports shall be submitted in person or by mail to the Commission of Game and Inland Fisheries, P. O. Box 11104, Richmond, Virginia 23230 - Attention - SAFETY OFFICER.

COMPLETE ALL BLOCKS (Indicate those not applicable by "NA")

NAME AND ADDRESS OF OPERATOR | AGE | OPERATOR'S EXPERIENCE THIS TYPE OF BOAT: ☐ UNDER 20 HOURS ☐ 20 TO 100 HOURS ☐ 100 TO 500 HOURS ☐ OVER 800 HOURS | OTHER BOAT OPERATING EXP.: ☐ UNDER 20 HOURS ☐ 20 TO 100 HOURS ☐ 100 TO 500 HOURS ☐ OVER 500 HOURS

NAME AND ADDRESS OF OWNER | RENTED BOAT ☐ YES ☐ NO | NO. OF PERSONS ON BOARD | FORMAL INSTRUCTIONS IN BOATING SAFETY: ☐ NONE ☐ STATE ☐ USCG AUXILIARY ☐ OTHER (Indicate) ☐ U.S. POWER SQUADRON ☐ AMERICAN RED CROSS

VESSEL NO. 1

BOAT NUMBER | BOAT NAME | BOAT MAKE | BOAT MODEL | MFR HULL IDENTIFICATION NO.

TYPE OF BOAT: ☐ OPEN MOTORBOAT ☐ CABIN MOTORBOAT ☐ AUXILIARY SAIL ☐ SAIL (ONLY) ☐ ROWBOAT ☐ OTHER (Specify)

HULL MATERIAL: ☐ WOOD ☐ ALUMINUM ☐ STEEL ☐ FIBERGLASS (Plastic) ☐ OTHER (Specify)

ENGINE: ☐ OUTBOARD ☐ INBOARD GASOLINE ☐ INBOARD DIESEL ☐ INBOARD-OUTDRIVE ☐ OTHER (Specify)

BOAT DATA (Propulsion): NO. OF ENGINES ____ MAKE OF ENGINE ____ HORSEPOWER (Total) ____ YEAR BUILT (Engine) ____

BOAT DATA (Construction): LENGTH ____ MOLDED BEAM ____ DEPTH (Inner Transom To Keel) ____ YEAR BUILT (Boat) ____

ACCIDENT DATA

DATE OF ACCIDENT | TIME ____ AM ____ PM | NAME OF BODY OF WATER | LOCATION (Give location precisely)

STATE | NEAREST CITY OR TOWN | COUNTY

WEATHER: ☐ CLEAR ☐ RAIN ☐ CLOUDY ☐ SNOW ☐ FOG ☐ HAZY

WATER CONDITIONS: ☐ CALM ☐ CHOPPY ☐ ROUGH ☐ VERY ROUGH ☐ STRONG CURRENT

TEMPERATURES (Estimate): AIR ____ °F WATER ____ °F

WIND: ☐ NONE ☐ LIGHT (0-6 MPH) ☐ MODERATE (7-14 MPH) ☐ STRONG (15-25 MPH) ☐ STORM (Over 25 MPH)

VISIBILITY: ☐ GOOD ☐ FAIR ☐ POOR

WEATHER ENCOUNTERED: ☐ WAS AS FORECAST ☐ NOT AS FORECAST ☐ NO FORECAST OBTAINED

OPERATION AT TIME OF ACCIDENT (Check all applicable): ☐ CRUISING ☐ APPROACHING DOCK ☐ WATER SKIING ☐ RACING ☐ TOWING ☐ BEING TOWED ☐ DRIFTING ☐ AT ANCHOR ☐ TIED TO DOCK ☐ FUELING ☐ FISHING ☐ HUNTING ☐ SKIN DIVING OR SWIMMING ☐ OTHER (Specify)

TYPE OF ACCIDENT: ☐ GROUNDING ☐ CAPSIZING ☐ FLOODING ☐ SINKING ☐ FIRE OR EXPLOSION (Other than fuel) ☐ FIRE OR EXPLOSION (Fuel) ☐ COLLISION WITH VESSEL ☐ COLLISION WITH FIXED OBJECT ☐ COLLISION WITH FLOATING OBJECT ☐ FALLS OVERBOARD ☐ FALLS IN BOAT ☐ BURNS ☐ HIT BY BOAT OR PROPELLER ☐ OTHER (Specify)

WHAT, IN YOUR OPINION, CAUSED THE ACCIDENT? ☐ WEATHER CONDITIONS ☐ EXCESSIVE SPEED ☐ NO PROPER LOOKOUT ☐ OVERLOADING ☐ IMPROPER LOADING ☐ HAZARDOUS WATERS ☐ FAULT OF OTHER PERSON ☐ FAULT OF HULL ☐ FAULT OF MACHINERY ☐ FAULT OF EQUIPMENT ☐ OTHER (Specify)

PERSONAL FLOTATION DEVICES

WAS THE BOAT ADEQUATELY EQUIPPED WITH CG APPROVED LIFESAVING DEVICES? ☐ YES ☐ NO

WERE THEY ACCESSIBLE ☐ YES ☐ NO

WERE THEY USED ☐ YES ☐ NO

WAS THE VESSEL CARRYING NON-APPROVED LIFESAVING DEVICES ☐ YES ☐ NO

WERE THEY ACCESSIBLE ☐ YES ☐ NO

WERE THEY USED ☐ YES ☐ NO

FIRE EXTINGUISHERS

WERE THEY USED - (If yes, list Type(s) and number used.) ____

☐ NO

☐ NOT APPLICABLE

PROPERTY DAMAGE (Est.) THIS BOAT $ ____ OTHER BOAT $ ____ OTHER PROPERTY $ ____

DESCRIBE PROPERTY DAMAGE

NAME AND ADDRESS OF OWNER (Damaged Property)

PREVIOUS EDITIONS ARE OBSOLETE — COMPLETE BOTH SIDES

COMPLETE ALL BLOCKS (Indicate those not applicable by "NA")

DECEASED

NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM: ☐ SWIMMER ☐ NON-SWIMMER	DEATH CAUSED BY: ☐ DROWNING ☐ DISAPPEARANCE ☐ OTHER
NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM: ☐ SWIMMER ☐ NON-SWIMMER	DEATH CAUSED BY: ☐ DROWNING ☐ DISAPPEARANCE ☐ OTHER
NAME	ADDRESS	DATE OF BIRTH	WAS VICTIM: ☐ SWIMMER ☐ NON-SWIMMER	DEATH CAUSED BY: ☐ DROWNING ☐ DISAPPEARANCE ☐ OTHER

INJURED

NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS: ☐ YES ☐ NO
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS: ☐ YES ☐ NO
NAME	ADDRESS	DATE OF BIRTH	NATURE OF INJURY	INCAPACITATED OVER 24 HOURS: ☐ YES ☐ NO

ACCIDENT DESCRIPTION

DESCRIBE WHAT HAPPENED (Include Failure of Equipment, If diagram is needed attach separately)

VESSEL NO. 2

NAME OF OPERATOR | ADDRESS | BOAT NUMBER

TELEPHONE NUMBER | BOAT NAME

NAME OF OWNER | ADDRESS

WITNESSES

NAME	ADDRESS	TELEPHONE NUMBER
NAME	ADDRESS	TELEPHONE NUMBER
NAME	ADDRESS	TELEPHONE NUMBER

PERSON COMPLETING REPORT

SIGNATURE | ADDRESS | DATE SUBMITTED

QUALIFICATION (Check one): ☐ OPERATOR ☐ OWNER ☐ INVESTIGATOR ☐ OTHER | TELEPHONE

(do not use) - FOR REPORTING AUTHORITY REVIEW (use agency date stamp)

NAME OF REVIEWING OFFICE | DATE RECEIVED | CAUSES BASED ON (Check one): ☐ THIS REPORT ☐ INVESTIGATION ☐ INVESTIGATION AND THIS REPORT ☐ COULD NOT BE DETERMINED

PRIMARY CAUSE OF ACCIDENT | REVIEWED BY

SECONDARY CAUSE OF ACCIDENT

BOATING ACCIDENT REPORTS

Under the Motorboats and Water Safety Act it is the duty of the operator of a vessel involved in a collision, accident, or other casualty involving a Vessel to submit a written casualty or accident report to the Virginia Commission of Game and Inland Fisheries when, as a result of an occurrence that involves the Vessel or its equipment (1) a person dies, (2) a person loses consciousness or receives medical treatment or is disabled for more than twenty-four hours; (3) damage to the vessel and other property damage totals more than one hundred dollars or (4) a person disappears from the vessel under circumstances that indicate probable death or injury.

A written report must be made (1) within forty-eight hours of the occurrence if a person dies within twenty-four hours of the occurrence, (2) within forty-eight hours of the occurrence if a person loses consciousness or receives medical treatment or is disabled for more than twenty-four hours or disappears from a vessel and (3) within five days of the occurrence or death if an earlier report is not required. When an operator of a vessel cannot submit a report, the owner shall submit the required report.

It is the duty of any operator of a vessel involved in a collision, accident, or other casualty, so far as he can do without serious danger to his own vessel, crew and passengers (if any) to render persons affected by the collision, accident, or other casualty such assistance as may be practicable and as may be necessary in order to save them from or minimize any danger and also give his name, address and identification of his vessel in writing to any person injured and to the owner of any property damaged. Any person who gratuitously and in good faith renders assistance at the scene of an accident shall not be held liable for any civil damage as a result of the rendering of assistance or for any act or omission in providing or arranging salvage, towage, medical treatment or other assistance where the assisting person acts as an ordinary, reasonably prudent man would have acted under the same or similar circumstances.

All accident reports shall be made without prejudice, shall be for the information of the Game Commission only, and shall not be open to Public inspection.

Nine Ways The Sportsman Proves His High I.Q.

By GEORGE M. DODSON

Harrisburg, Pennsylvania

JUST because someone rates a high Intelligence Quotient in the business, professional or industrial world, it does not necessarily follow that he would be awarded equally good marks as a sportsman. Beyond the city limits there's a whole new set of rules for measuring I.Q. Listed here are nine very important ones. How do these compare with your own ideas?

1. The sportsman with a high I.Q. tries never to make the same mistake twice. But, he reasons, having learned something from his experience, does he not have an obligation to share the results with others? There are few deeper feelings of regret than realizing you had information that might have helped a friend avoid an outdoors accident—if only you had warned him.

2. The sportsman with a high I.Q. obeys all laws and regulations concerning hunting, fishing and related activities. He believes that attitude represents his minimum obligation. Meanwhile, he tries to discover reasons behind these necessary restrictions, and eventually decides keeping in line with the spirit of the law is as urgent as simply staying within the limits of its wording. Somehow it seems easier to do what's required of him after he understands the logic behind the actions of regulatory bodies.

3. The sportsman with a high I.Q. shares the ordinary person's desire to get as much as possible for his investment in equipment. In one respect, however, he may be considerably more particular. He insists on maximum safety features in everything he buys. He questions every supposed bargain, not because he's adverse to saving money but only to make sure his purchase holds no features that might threaten his own or his companions' safety.

4. The sportsman with a high I.Q. firmly believes that spreading knowledge has merely scratched the surface if confined to members of his own generation. He sees far greater possibilities in helping young people gain wildlife wisdom at an early age, while they have all those happy years ahead of them. In fact he feels so strongly about this matter, he willingly devotes part of his time and effort to making the dream turn into reality.

5. The sportsman with a high I.Q. recognizes the importance of knowing about planning in conservation and ecology and all the rest. Hunting and fishing will never again be independent in the old sense of this word, yet he asks that everything stay in proper perspective. The rights and privileges to which he's entitled ought never suffer due to his lack of interest at crucial periods, especially during consideration of expanded restrictions.

6. The sportsman with a high I.Q. thrills to the thought that his influence and actions help shape the future. Being intensely alive and human, he has occasional feelings of greed and selfishness; his difference, though, lies in curbing such attitudes before they reach the active stage.

7. The sportsman with a high I.Q. wastes as little time as possible in griping. He talks when and where it has a chance to do some good, and he votes for officials who hold views similar to his. And he is honest enough to tell himself, "Finding faults is not so hard, but helping to correct them calls for the kind of intelligence I hope I have, plus inclination to use it."

8. The sportsman with a high I.Q. figures that dedication here demands his attention seven days a week, every week. Directly or indirectly, he constantly forms decisions aimed at improving wildlife resources. Nor can he postpone to some more convenient time the opportunity to put in a good word for conservation, better use of the woods and streams, and preservation of the good life which has meant so much to him. That's a job for every day.

9. The sportsman with a high I.Q. appreciates differences in viewpoints, and doesn't expect everyone to agree with him in all details. Still, the fundamental needs are surprisingly similar regardless of one's major enthusiasms. He attempts to appeal to each friend and acquaintance on their own level and their personal interests. By adapting his efforts to reach the most people and do it most effectively, the sportsman proves his high I.Q.

SNOW

MAGNIFICENT MISERY

by
Bill Weekes
Spartansburg, S. C.

WHEN it arrives, it grips man with an aura of majestic magic. To wildlife, it trumpets a challenge to survival. Its newly fallen presence pulls children out of doors like tunes from a Pied Piper's pipe. It pulls deer together into the low lands, sends small game into burrows and may signal some creatures to bed for a long winter's snooze.

Snow! Its calling cards are bleached hexagonal flakes —water vapor solidified—which dot the air with hypnotic constance. Mother of the Midwest's northern lakes, contributor to Canada's water-filled waterfowl haven—the pothole—snow is the harbinger, as well, of rivers and creeks.

But it wears, at times, malefic makeup. Devastator of Napoleonic and Teutonic armies, it once tossed a creamy shroud over Valley Forge soldiers, and has stilled, during its severest tempers, life's flow of blood for legions of livestock and deer.

Snow! It settles like sheets of parchment upon which are scratched quarried tracks for hunters and trappers to discern. "Her feet with a trap; her blood upon the snow, the four little foxes saw their mother go," moans the verse.

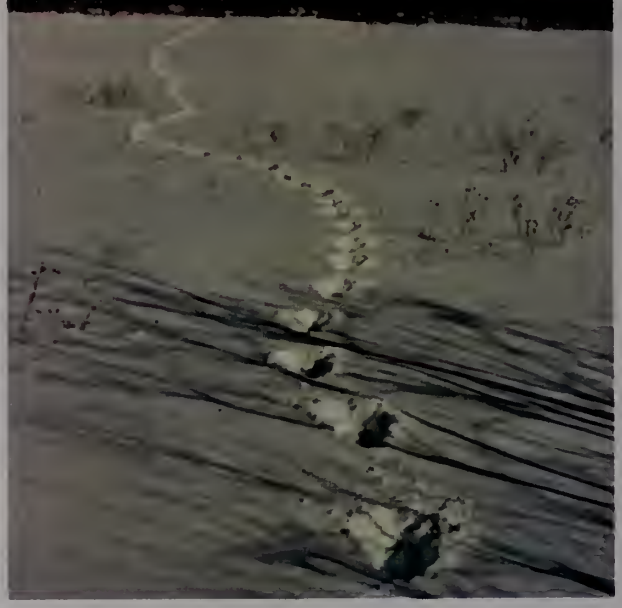
Snow! Who as a youth witnessing snow's annual visitation cannot recall the gaiety of puerile battles? Who can throw from his mind the mushy cannon balls fired asunder; the blurry view of blackened sleeping trees whizzing past prone bodies clutching flattened conveyances; the glacial forts; the lopsized figures of alabaster; the musty invigoration of sweating beneath bundles of coats amidst the frosty spray? Who can forget the tickle of prickled heat over flushed face and numb ears and the glazed vision of red filming the amber light after one has rushed, at last, back into the heated order of the home?

Snow! It is winter's rugs and draperies, muting the once strident roar of a neighborhood vehicle, dulling the shouts of excited kids bent on venting new ways of demonstrating this fluffy stuff's singularity. How quiet is a woodland of snow. How starkly stand out the tufts of vegetation, how orderly erect the trees, how precise can one trace the outlines of twigs and insect bolls against the backdrop of white.

Snow! Without it, many a poet's pen would have run dry.

"Though your sins be as scarlet, they shall be white as snow," wrote Isaiah.

"Before you love," goes a pessimistic Turkish pro-



Leonard Lee Rue III photo

verb, "learn to run through snow leaving no footprints." Love's indifference is likened to a dead volcano rimmed by snow. What are the three most silent things? One poet's triad was: the hour before the dawn, the mouth of one just dead, and the falling snow.

Scottish poet Robert Burns said pleasures were like snow falling in a river—a moment white, then melted forever. Shakespeare wrote of one as being "as chaste as unsunn'd snow." Another wrote that hopeful hearts will find forever roses beneath the snow. And where's grandfather's house? Of course—over the river and through the woods—but never fear—the horse knows the way to carry the sleigh through white and drifted snow.

John Whittaker Watson's tribute to this precipitation to the contrary, "Beautiful snow, it can do no wrong," snow CAN do wrong. It can break telephone and electric wires, melt and cause floods, bring avalanches, and harm wildlife.

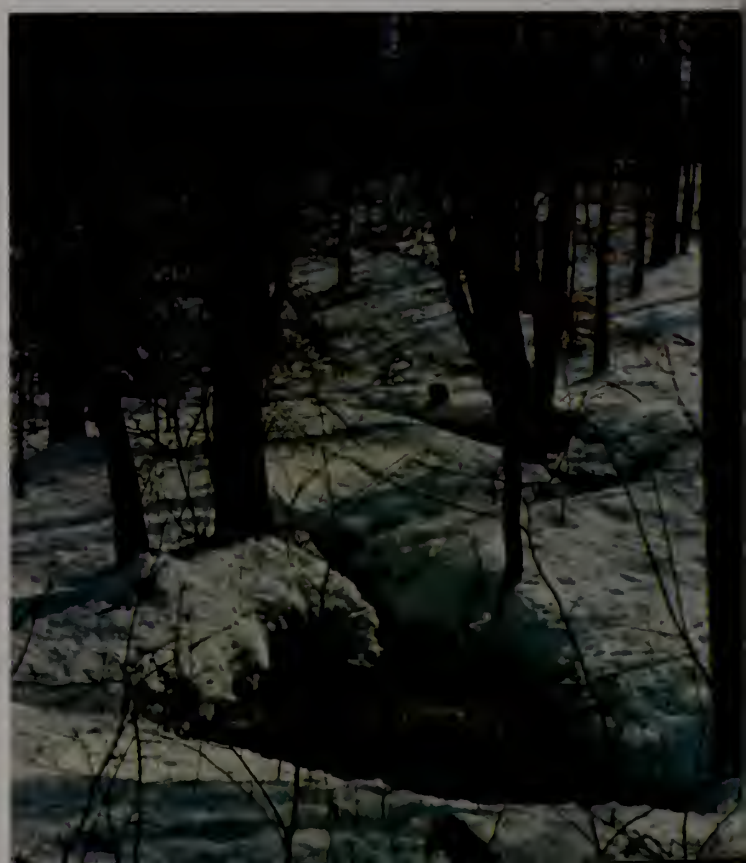
An early game manager, Aldo Leopold (1933) noted how snow may cause accidental mortalities in game. There have been cases of pheasants dying as the result of snowballs anchored to the tail, of their freezing to the ground while roosting, and of strangulation because of ice on the head. Bobwhite quail have succumbed to ice balls on plumage and nasal passages clogged shut by snow. Ducks have died after feathers and feet were frozen to ice, and the red grouse of Scotland has had its eggs frozen by frigid weather. One of the important causes of accidental winter death among wildlife is snow imprisonment. Quail, ruffed grouse, rabbit and Hungarian partridges are among the victims Leopold pinpointed.

Ruffed grouse have a habit of diving into snow to roost. According to John Madson (1969), grouse may dwell under 20 inches of snow where the temperature may be as much as 60 degrees warmer than that above the snow. It is when snow becomes covered with sleet that grouse become imprisoned and die. The quail, Hungarians and rabbits may also get stuck after sleet descends, gluing them atop the snow. Unlike the human courier, snow may keep various gallinacious birds from making a swift completion of their appointed rounds.

Ruffed grouse also will roost in dense conifers, which offer protection from chilly winds. Conifers also benefit deer in this respect. Trippensee (1948) noted experiments which showed that at zero degrees F. the average survival period of birds and mammals undergoing winter fasting was reduced 25 percent by subjecting the animals to constant air movement of only 5.8 m.p.h. as compared to animals protected from the wind at the same temperatures.

Limitation of food also is brought into sharp focus after snow arrives. Many foods which deer eat from the ground—acorns, various herbacious plants and dead leaves—are denied a herd after a heavy snow fall. It is not surprising the condition of the winter range—the abundance and accessibility of browse—is the key to the number of deer a range can support. This is deceiving because not all of a deer's home range will be used after heavy snows. Deer tend to congregate into yards, which are sheltered areas, areas protected by cover and topography. Yarding herds may not use any more than ten or 15 percent of its normal range during snow time. The herd's available food supply will be restricted during yarding. Yarding also enhances danger of contagion.

In the southeastern states, the climate is less severe and yarding is not common, if it exists at all. At the Broad Run Management Area in western Virginia's mountainous Craig County, the severest weather is during January and February—the two months when most of the annual 18 inches of snow falls. Snow track and pellet group counts, plus sight observations, revealed deer concentrations on the lower elevations along



Sudden dietary changes may by dangerous to deer, which is principally a browse eating animal. Many cases are recorded where deer have died with stomachs full of alfalfa hay. The deer has failed to digest the hay because "right" bacteria were absent in the deer rumen, bacteria that is necessary for the initial breaking down of foodstuffs.

Broad Run Creek road. In fact, one winter, 300 percent more deer were sighted in these lower portions than on any other part of the range. Here, a browse line was detected on patches of honeysuckle.

E. D. Seneca (1961) made this observation about the winter concentration:

"There is no apparent indications that deer move to the lower elevations until severe weather occurs. The exact time when the deer move, and the duration they stay varies from year to year and is governed by the severity of the winter snows. During intermittent periods of relatively good weather in the winter, deer leave these lower elevations and range over the study area. The concentration of deer is neither an actual yarding, as is seen in the more northern states, nor do deer exhibit any seasonal preference of range as is seen in some of the western states."

Where periods of severity are long and not relieved by spells of intermittent mild weather, the world of snow will starve out that portion of a herd in excess of the winter range's carrying capacity. The most palatable plants disappear, browse lines are evident as are deer carcasses.

Most plans for providing supplemental food to deer during heavy snow periods have been stopped for two simple reasons—the large cost and impracticality involved, and the threat of habitat destruction. Some northern states have spent tens of thousands of dollars on supplemental food for whitetail. This practice, however, shuts off the natural check on herd size, a role played by starvation. Supplemental food might enable enough survival and continued herd growth so as to make matters worse a subsequent winter, a winter when money for extra food might not be available. A consequence might be a larger population having to subsist on a winter range that had a low carrying capacity to begin with. The ultimate result, of course, is overbrowsing and habitat destruction.

A cheaper and safer method of providing deer emergency food is by cutting down trees on the winter range. This gives deer access to new browse in the form of upper branches.

Except for the predation of man, the whitetail is pretty much restricted to the mercy of its habitat during the winter. Other denizens of snow country adapt in various ways. Protective coloration in the polar bear, snowy owls, snow petrel, snowshoe hare, and artic fox is, of course, designed to make their presence less apparent, either to prey or predator. One denizen of the northern half of the Northern Hemisphere whose coloration changes with the seasons is the ptarmigan. With winter this bird has shed its yellows and greys and turns white (except for the tip of the tail).

Another adaptation related to the exigencies of snow is found in the ruffed grouse. This bird grows small rods of skin cuticle (about one-eighth of an inch) along the edges of its toes. The cuticles provide a snow-shoe effect for the bird so that it is able to walk on deep snow to reach browse. The same concept of weight distribution is found in the wide feet of the Canada lynx and snowshoe rabbit, both of which must make their rounds amid the drifts.

Some animals have unique adaptations for survival in the snow. This ruffed grouse grows snowshoes on its feet to help it walk on the drifts.

Photo by Leonard Lee Rue, III

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